



## 2016 WISCONSIN CRANBERRY SCHOOL

The WSCGA Education Committee, the Wisconsin Cranberry Research and Education Foundation, Inc. and University of Wisconsin Extension are pleased to announce the program and registration for the 2016 Wisconsin Cranberry School, a two-day program with a wide range of topics for growers and those interested in cranberry production.

The event will be held Wednesday and Thursday January 20-21 at Holiday Inn Hotel and Convention Center, 1001 Amber Avenue, Stevens Point, Wisconsin 54481. Mail-in registration form is enclosed. Please mail early for best rates.

On WEDNESDAY - January 20, Cranberry School begins with 8:00 AM Registration and the WSCGA Winter Trade Show. The first General Session begins at 9:30 AM, followed by a morning break, and adjourns by 5:00 PM. A Social Hour will be held for School Participants and Exhibitors from 5:00 PM to 6:00 PM that evening.

On THURSDAY, January 21, Cranberry School begins with sessions at 9:00 AM, and the school will adjourn by 3:45 PM.

**YOUR REGISTRATION FEE** Includes all meeting materials, breaks, lunch each day, a complimentary beverage and hors d'oeuvres at the Social Hour Reception. Name badges are included in your meeting materials and must be worn to all school sessions, trade show areas, lunches, and Social Hour Reception. Please pick up your Cranberry School materials at the WSCGA Registration Table on Wednesday morning.

**Lodging** - All sessions will be held at the Holiday Inn Hotel and Convention Center in Stevens Point, WI. A block of guest rooms has been reserved at a Special Group Rate of \$94 Single, Double, Triple or Quad, plus tax. This rate is refundable and not charged until check-in. Suite rates are available on request. To make Holiday Inn Room Reservations:

- PHONE DIRECT** - Call Stevens Point Holiday Inn at **715-344-0200** and request “**CRA**” room block.
- TOLL-FREE PHONE** - Call 1-800-HOLIDAY & request group room block code “**CRA.**”
- GO ONLINE** - Visit the [Holiday Inn website](#) and book guest rooms online:
  - Free Cancellation until 6:00 PM local hotel time on JANUARY 19, 2015.
  - No Holiday Inn Room Deposit Required.
  - “Best Available Rates” shown on Holiday Inn website may be non-refundable.

Be sure to ask for special **CRA rate**; WSCGA gets credit for Holiday Inn rooms booked, to reduce overall meeting costs.

**Pesticide Applicator Training and Certification – Wednesday January 20** - A pesticide applicator training and certification test session will be held on **Wednesday, January 20th** beginning at 8:00 AM. **Registration for this session is separate from the Cranberry School registration. You must sign up with the Wood County Extension Office at least 5 days in advance of the applicator training session.** Because of regulatory requirements, walk-in registrations the day of the applicator training are prohibited. Please contact **Wood County Extension Office at 715-421-8440** to register. Contact your local County Extension Offices to find out about other training opportunities and certification programs.

**WSCGA Winter Meeting** – Wisconsin State Cranberry Growers Association will hold the annual Winter Meeting from 1:00-2:30 PM on Wednesday, January 20. Advance registration is not required; however, the meeting is for WSCGA members only. Grower members may pick up a board election ballot at Registration Table prior to the meeting.

**WSCGA Trade Show** – Winter Trade Show is held in conjunction with Wisconsin Cranberry School and WSCGA Winter Meeting on Wednesday January 20. Trade show is open 8:00 AM - 3:30 PM. **Remember: You must have a name badge to enter the Trade Show area.** There is a \$10.00 admission charge for non-WSCGA members to attend the show.

**PLEASE COMPLETE REGISTRATION FORM & RETURN WITH CHECK PAYMENT TO:**

**WCREF – Wisconsin Cranberry Research and Education Foundation •  
www.wiscran.org 132 E. Grand Avenue - Suite 202, Wisconsin Rapids, WI**

**EMAIL: [wiscran@wiscran.org](mailto:wiscran@wiscran.org) PHONE: 715-423-2070 FAX: 715-423-0275**



# 2016 Wisconsin Cranberry School - Registration Form

**FOR EARLY BIRD PRICING, COMPLETE & RETURN WITH CHECK PAYMENT  
MAILED & RECEIVED AT WSCGA BY:  
MONDAY, JANUARY 4, 2016  
[NO TELEPHONE RESERVATIONS WILL BE ACCEPTED]**

Company: \_\_\_\_\_

Mail Address: \_\_\_\_\_

City: \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_

Email: \_\_\_\_\_ Fax: \_\_\_\_\_

**PLEASE COMPLETE & RETURN WITH CHECK PAYMENT:**

| <b>COMPLETED REGISTRATION FORM &amp; CHECK PAYMENT Received at WSCGA Office</b> | <b>Cranberry School Registration Fee</b> |
|---|--|
| By MONDAY, JANUARY 4, 2015  | <b>\$110</b> per person                  |
| By MONDAY, JANUARY 11, 2016   | <b>\$125</b> per person                  |
| ON or AFTER January 12, 2016 and ON-SITE at Cranberry School                    | <b>\$150</b> per person                  |

**CRANBERRY SCHOOL REGISTRATION:**

# of Attendees: \_\_\_\_\_ x School Registration Fee \$ \_\_\_\_\_ = \$ \_\_\_\_\_

**CHECK PAYMENT TOTAL = \$ \_\_\_\_\_**

**Make Checks Payable & Mail to: WCREF - Wisconsin Cranberry Research & Education Foundation  
PO Box 365, Wisconsin Rapids, WI 54495-0365**

**PLEASE PRINT NAMES OF SCHOOL REGISTRANTS FOR NAME BADGES:**

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

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# 2016 Wisconsin Cranberry School

January 20-21, 2016

## Day 1 – Wednesday January 20

|           |   |  |
|-----------|---|--|
| 8:00 am   | <b>Registration</b><br>Trade Show Opens   | <b>Pesticide Applicator Training</b><br>Training: 8:00 am to 10:30am<br>Exam: 10:30 am<br><br>PAT Exam<br><br><i>Matt Lippert, Wood County Extension</i> |
| 9:30 am   | <b>Opening Session</b><br><b>Industry Awards</b><br><b>Cranberry Institute Update</b><br><i>Terry Humfeld, Executive Director Cranberry Institute</i><br><b>US Cranberry Marketing Committee Update</b><br><i>Karen Gibson, Communications &amp; Marketing Specialist, US Cranberry Marketing Committee</i> |  |
| 10:45 am  | <b>Break in Trade Show Area</b><br>Registration for WSCGA Annual Meeting  |  |
| 11:30     | Lunch<br>Trade Show time  |  |
|           |   | Lunch<br>Trade Show Time   |
|           | <b>Session A</b>  | <b>Session B</b>   |
| 1:00      | <b>WSCGA Annual Meeting</b>   | <b>New Emission Diesel Engines –<br/>Maintenance and Operation</b><br>TBA  |
| 2:30      | Break in Trade Show Area  |  |
| 3:30      | <b>Using Social Media to Put the Best Image of<br/>the Industry Forward</b><br><i>Kris Naidl, Katie Whitlock, Laughlin Constable</i><br><b>EPA Changes to Worker Protection<br/>Standards and Pesticide Applicator Training<br/>and Certification Programs</b><br>DATCP                                     | <b>Observations and Experience with Harvest<br/>Damage and Stress on Vines</b><br>Grower Panel   |
| 4:00      | <b>Cranberry Virus and Disease Issues</b><br><i>Lindsay Wells-Hansen, Sara Thomas-Sharma, and Patricia McManus</i><br>UW Madison  |  |
| 4:30      | <b>Using degree-days to maximize your pest management tool set</b><br><i>Elissa Chasen and Shawn Steffan, USDA ARS</i>  |  |
| 5:00-6:00 | Adjourn—Social Hour   |  |

**Day 2 – Thursday, January 21**

|         |   |  |
|---------|---|--|
| 9:00 AM | <b>Live CLKR Survey on Management Practices</b><br><b>Christelle Guédot, UW Madison, Matt Lippert, UW Extension</b>   |  |
|         | <b>Session A</b>  | <b>Session B</b>   |
| 9:30 AM | <b><i>What's Up As the Temperature Goes Down?: Understanding Frost Night Conditions</i></b><br><i>Beth Workmaster and Amaya Atucha , UW Madison</i>   | <b><i>Welding Basics and Advances – What's New</i></b>             |
| 10:00   | <b>Break</b>  |  |
| 10:15   | <b><i>Cranberry Breeding and Genetics Update</i></b><br><i>Juan Zalapa</i>  | <b><i>Welding Basics and Advances – What's New (Continued)</i></b> |
| 10:45   | <b><i>Lessons Learned for Initial Assessment of Unmanned Aerial Vehicle (UAV, drone) Based Normalized Difference Vegetative Index (NDVI) Measurement Over Cranberry</i></b><br><i>Brian Luck</i>  |  |
| 11:30   | <b>LUNCH</b>  |  |
|         | <b>Session A</b>  | <b>Session B</b>   |
| 12:30   | <b><i>Evaluation of Insect Resistance in Wisconsin Cranberry Varieties</i></b><br><i>Erin McMahan and Christelle Guédot, UW Madison</i>   | <b><i>Safety on the Marsh and Around the Shop</i></b>              |
| 1:00    | <b><i>A Synthesis of Recent Research Regarding the Spring Flood in Wisconsin: Knowns and Unknowns</i></b><br><i>Janet VanZoeren and Shawn Steffan, USDA ARS</i>   |  |
| 1:30    | <b><i>Discovery and Virulence-Screening of Native Nematodes in Wisconsin Cranberries</i></b><br><i>Shane Foye and Shawn Steffan, USDA ARS</i>   |  |
| 2:00    | <b>BREAK</b>  |  |
| 2:15    | <b><i>Root Growth Patterns in Cranberries: Why Is It Important and How Can it Affect Yield and Production Efficiency?</i></b><br><i>Amaya Atucha and Beth Workmaster, UW Madison</i>  | <b><i>Safety on the Marsh and Around the Shop (Continued)</i></b>  |
| 2:45    | <b><i>Our Cranberry Toolbox – Present and Future Cranberry Screening Program</i></b><br><i>Jack Perry, UW Madison</i><br><br><b><i>Revisiting the 'S' Word in Cranberries</i></b><br><b><i>Big Data: Big Possibilities for the Cranberry Industry</i></b><br><i>Jed Colquhoun, UW Madison</i> |  |
| 3:45    | <b>Adjourn</b>  |  |

# WISCONSIN CRANBERRY SCHOOL

WEDNESDAY - JANUARY 20, 2016

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## WSCGA Trade Show

The annual WSCGA Winter Trade Show is conducted in conjunction with the Wisconsin Cranberry School. Trade Show time is provided throughout the day on Wednesday. The show opens at 8:00 AM and wraps up at 3:30 PM.

## General Sessions

### **9:30 AM Industry Awards**

The program will begin with recognition being provided to individuals and groups who have provided exemplary services to the industry throughout the year. The hosts for the 2015 WSCGA Summer Meeting, Field Day and Trade Show will be recognized. WSCGA President Mark Mahoney will recognize the volunteer of the year with the WSCGA President's Award. The WSCGA Service to Industry Award will be presented to Guy Gottschalk and Ray Habelman for providing exceptional service to the cranberry industry in Wisconsin. This award is the highest recognition that the WSCGA provides.

### **10:00 AM Cranberry Institute Update**

*Terry Humfeld, Executive Director Cranberry Institute*

Terry Humfeld, Executive Director of the Cranberry Institute, will provide an update on efforts by his organization relative to health research benefits and communication; crop research and work with the industry on International MRLs especially progress on dealing with issues surrounding Bravo and the European Union.

### **US Cranberry Marketing Committee Update**

*Karen Gibson, Communications & Marketing Specialist, US Cranberry Marketing Committee*

Karen Gibson, Communications and Marketing Specialist for the CMC will give a presentation to update growers on efforts by the Federal Marketing Committee to improve demand through its domestic and international promotions programs.

### **1:00 PM WSCGA Annual Meeting**

The business meeting of the Association is open to members. Elections will be held for three board seats and reports will be heard on the activities of the organization for the past year. Special presentations will be made by WSCGA Legislative Counsel on the Public Policy Program and by Laughlin Constable, communication consultants for the Association, on media efforts in 2015 and plans for 2016.

## Breakout Session A

### **3:30 PM Using Social Media to Put the Best Image of the Cranberry Industry Forward**

*Kris Naidl, Katie Whitlock, Laughlin Constable*

Social Media has become the norm in terms of communication and everyone on the marsh has an opportunity to put the best image of the industry in the public – or the worst! In this session communications specialists from Laughlin Constable will talk about some things to think about before you post that picture or comment on social media.

### **EPA Changes to Worker Protection Standards and Pesticide Applicator Training and Certification Programs**

*DATCP*

A representative from the Wisconsin Department of Agriculture, Trade and Consumer Protection will provide information on proposals by the US EPA to make changes to the Worker Protection Standards and the Pesticide Applicator Training and Certification program.

### **4:00 PM Cranberry Virus and Disease Issues**

*Lindsay Wells-Hansen, Sara Thomas-Sharma, and Patricia McManus UW Madison*

Berry scarring symptoms have been observed since the 2012 growing season. This presentation will provide a summary of research on TSV and BShV to date, highlighting results from TSV distribution studies conducted over the past two growing seasons. A brief summary of fruit rot research conducted over the past three growing seasons will also be discussed.

# WISCONSIN CRANBERRYSCHOOL

WEDNESDAY - JANUARY 20, 2016 CONTINUED

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**4:30 PM Using Degree-Days to Maximize Your Pest Management Tool Set**

*Elissa Chasen and Shawn Steffan, USDA ARS*

Why is it so difficult to achieve insect pest control with chemical applications? Chemical control is limited by several biotic and abiotic factors. This talk sheds light on these considerations and emphasizes those that are within the control of the grower, particularly the use of degree-days to time insecticide applications for maximum efficacy. Ultimately, however, the most powerful pest management may not rely on insecticide applications.

**Breakout Session B**

**1:00 PM New Emission Diesel Engines - Truck Maintenance and Operation**

Speakers in this session will discuss general maintenance issues for trucks, including new emission diesel engines.

**3:30 PM Observations and Experience with Harvest Damage and Stress on Vines**

*Grower Panel*

This session was a popular one the last three years, so we decided to present an updated version. Berry pumps, harrows, water reels, GPS, and elevators all are important parts of the harvesting process. As new technologies are melded with older ones, growers have seen a great change in the way the crop is harvested. This panel will talk about some of these changes and their experiences in the last year. Jayne Sojka will be moderating this panel.

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| <p style="text-align: center;"><b>Wednesday, January 20</b><br/><b>5:00 PM – 6:00 PM SOCIAL HOUR</b></p> |
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# WISCONSIN CRANBERRY SCHOOL

THURSDAY - JANUARY 21, 2016

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## General Sessions

### **9:00 AM Live Survey on Management Practices**

*Christelle Guédot, UW Madison - Department of Entomology / Matt Lippert, UW Extension*

During this session, growers will be able to respond via CLIKR technology to a series of questions on practices during the growing season. The questions will also allow growers to identify areas of priority for research and education programs and to collect aggregate data on practices useful for program planning. After the responses, speakers will discuss each production issue and seek out experiences with growers from the 2015 growing season.

### **2:45 PM Our Cranberry Toolbox – Present and Future - The Wisconsin Cranberry Screening Program**

*Jack Perry, UW Madison*

A review of 2015 projects on cranberry pesticide trials will be provided with an outlook on what new products are in our future.

### **Revisiting the 'S' Word in Cranberries**

*Jed Colquhoun, UW Madison*

When it comes down to it, much of the supply chain interest in sustainability comes down to telling the cranberry story from behind the farm gate to those no longer involved in agriculture. We'll discuss cranberry industry efforts to document and communicate the many advancements and successes cranberry growers have achieved in recent years.

### **Big data: Big Possibilities for the Cranberry Industry**

*Jed Colquhoun, UW Madison*

Across agriculture, "big data" has been big news recently, but the practical applications at the grower level are not well understood. We'll discuss the potential benefits of using a "big data" approach to advance cranberry production and economics.

## Breakout Session A

### **9:30 AM What's Up as the Temperature Goes Down?: Understanding Frost Night Conditions**

*Amaya Atucha and Beth Workmaster, UW Madison*

Several factors contribute to the environmental conditions that develop on a cranberry marsh overnight. We'll review what happens on frost nights and also consider how the cranberry plant's dormancy and development play a role in management decisions.

### **10:15 AM USDA Agricultural Research Cranberry Genetics & Genomics Program at UW Madison**

*Juan Zalapa, USDA ARS*

The Zalapa lab will give a presentation on the program at UW Madison to continue to map the cranberry genome, to identify genes associated with different traits, and to determine the value to growers.

### **10:45 AM Lessons Learned For Initial Assessment of Unmanned Aerial Vehicle (UAV, drone) Based Normalized Difference Vegetative Index (NDVI) Measurement Over Cranberry**

*Brian Luck, UW Madison*

Normalized Difference Vegetative Index (NDVI) is used to assess plant health during the active growing season. Eight cranberry beds were measured weekly with geo-reference NDVI images during the 2015 growing season. Results from this study will be presented along with lessons learned from Unmanned Aerial Vehicle (UAV) measurement techniques.

### **12:30 PM Evaluation of Insect Resistance in Wisconsin Cranberry Varieties**

*Erin McMahan and Christelle Guédot, UW Madison*

Host plant resistance to the three main insect pests in Wisconsin was investigated in the field and in the lab over the last 3 years. A final synthesis of results will be presented and show that significant differences were found between cranberry varieties.

# WISCONSIN CRANBERRY SCHOOL

THURSDAY - JANUARY 21, 2016 CONTINUED

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**1:00 PM            A Synthesis of Recent Research Regarding the Spring Flood in Wisconsin:  
Knowns and Unknowns**

*Janet VanZoeren and Shawn Steffan, USDA ARS*

The spring flooding research that has taken place in the Steffan lab over the past few years will be discussed. Janet will cover what we know about the spring pest control flood, based on her research over the past two years as well as previous findings from the lab, which help explain when flooding will be most effective. She will additionally review some of the things we still do not know about the spring flood, and explore some potential direction for future research.

**1:30 PM            Discovery and Virulence-Screening of Native Nematodes in Wisconsin Cranberries**

*Shane Foye and Shawn Steffan, USDA ARS*

We will share the results of an entomopathogenic nematode survey that took place during the summer of 2015. Three nematode lines have been recovered, and their ability to kill cranberry pests will be discussed. Experiments aimed at understanding the biology and ecology of these nematodes will be also be presented.

**2:15 PM            Root Growth Patterns in Cranberries: Why Is It Important and How Can it Affect Yield and  
Production Efficiency?**

*Amaya Atucha and Beth Workmaster, UW Madison*

Timing and production of new roots have a strong influence on nutrient and water uptake, and consequentially on fruit production and quality. This talk will cover aspects related to the functions and characteristics of different types of roots in woody perennial plants, in addition to results from our first year of data on timing of cranberry vine root production in Wisconsin

**Breakout Session B**

**9:30 AM            Welding Basics and Advances – What's New**

**12:30 PM           Safety on the Marsh and Around the Shop**



